Claims:

- A method for designing a fluid dynamic bearing system, comprising:
 determining a first stability ratio for a first journal bearing configuration;
 determining a second stability ratio for a second journal bearing configuration;
 and
 comparing the first and the second stability ratios.
- 2. The method of claim 1, wherein the first configuration comprises two subjournal bearings and the second configuration comprises three sub-journal bearings.
- 3. The method of claim 2, wherein each sub-journal bearing of the first configuration has a length equal to substantially one-half of a total journal length and each sub-journal bearing of the second journal configuration has a length equal to substantially one-third of the total journal length.
- 4. The method of claim 1, further comprising the step of determining a third stability ratio of a third journal bearing configuration if the second stability ratio is greater than the first stability ratio.
- 5. The method of claim 4, further comprising the step of comparing the second and third stability ratios.
- 6. The method of claim 4, wherein the first configuration comprises two subjournal bearings, the second configuration comprises three sub-journal bearings, and the third configuration comprises four sub-journal bearings.
- 7. The method of claim 6, wherein each sub-journal bearing of the first configuration has a length equal to substantially one-half of a total journal length, each sub-journal bearing of the second journal configuration has a length equal to substantially one-third of the total journal length, and each sub-journal bearing of the

third journal configuration has a length equal to substantially one-fourth of the total journal length.

- 8. The method of claim 1, wherein the first configuration comprises N number of sub-journals and the second configuration comprises (N+1) number of sub-journals.
- 9. The method of claim 8, further comprising the steps of:

determining a third stability ratio of a third journal bearing configuration, the third configuration comprising (N+2) number of sub-journals, if the second stability ratio is greater than the first stability ratio; and

comparing the third stability ratio to the second stability ratio.

10. A fluid dynamic bearing system, comprising:

a gap region between an inner member and an outer member;

an optimal journal bearing configuration, including at least three sub-journal bearings, disposed along the gap region, wherein the optimal configuration is determined by a method, comprising:

determining a first stability ratio for a first journal bearing configuration; determining a second stability ratio for a second journal bearing configuration;

comparing the two stability ratios; and

determining that the second stability ratio is greater than the first stability ratio.

- 11. The system of claim 10, wherein the first configuration comprises two subjournal bearings and the second configuration comprises three sub-journal bearings.
- 12. The system of claim 11, wherein each sub-journal bearing of the first configuration has a length equal to substantially one-half of a total journal length and each sub-journal bearing of the second journal configuration has a length equal to substantially one-third of the total journal length.

Attorney Docket No.: SEA/3352

13. The system of claim 10, wherein the method further comprises the steps of: determining a third stability ratio of a third journal bearing configuration; and comparing the third stability ratio to the second stability ratio.

- 14. The system of claim 13, wherein the first configuration comprises two subjournal bearings, the second configuration comprises three sub-journal bearings, and the third configuration comprises four sub-journal bearings.
- 15. The system of claim 14, wherein each sub-journal bearing of the first configuration has a length equal to substantially one-half of a total journal length, each sub-journal bearing of the second journal configuration has a length equal to substantially one-third of the total journal length, and each sub-journal bearing of the third journal configuration has a length equal to substantially one-fourth of the total journal length.
- 16. The system of claim 10, wherein the first configuration comprises N number of sub-journals and the second configuration comprises (N+1) number of sub-journals.
- 17. The system of claim 16, wherein the method further comprises the steps of: determining a third stability ratio of a third journal bearing configuration, the third configuration comprising (N+2) number of sub-journals; and comparing the third stability ratio to the second stability ratio.
- 18. A fluid dynamic bearing system, comprising: a first gap region between an inner member and an outer member; and at least three sub-journal bearings disposed along the first gap region, the at least three sub-journal bearings associated with a first stability ratio, the first stability ration greater than a second stability ratio associated with having only two subjournal bearings disposed along the first gap region of the fluid dynamic bearing system.

Attorney Docket No.: SEA/3352

19. The system of claim 18, further comprising a hub coupled to the outer member and configured to rotate relative to the inner member.

20. The system of claim 18, further comprising a hub coupled to the inner member and configured to rotate relative to the outer member.